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STANDARDIZATION IN THE UAR.

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STANDARDIZATION IN THE UNITED ARAB REPUBLIC

I. Historical

1. In its industrial drive, the UAR has taken care to ensure high quality and reasonable prices for all industrial products, so that they may gain confidence and find a good market both at home and abroad.

With that end in view, special emphasis was given to scientific techniques of development which lead to optimal utilization of national resources for the acceleration of industrial development within the frame of the over-all adopted national plan.

In doing so, the UAR realized the importance of standardization for industrial promotion and expansion and for the production of goods and services of high quality at reasonable costs.

In fact, this realization was induced by the successful experience of the more developed countries, which proved the importance of standardization not only in economic use of materials and human effort, but also in regulating the flow of trade, reducing production and distribution costs, and ensuring basic qualities of goods.

2. Until 1956, there was no definite system for standardization in the UAR, and the quality of locally produced or imported products was governed by some different foreign specifications.

In 1939, the Egyptian Engineers' Society made the first positive trial in this field, and after eight years succeeded in issuing 40 drafts of Egyptian Standard Specifications for some building materials, concrete products, sanitary installations, metallic networks, electrical equipment, engineering drawings, as well as symbols and terminology.

3. Since 1885, Egypt tried to adopt the metric system for measurements, and until 1951 when a law was issued forcing the use of metric units for weights and measures all over the country after a transition period of five years.

In 1956, it was found necessary to prolong such transition period, and since 16 November 1961, the metric system became the only measuring system applicable in the UAR.

4. When the Ministry of Industry was established in 1956, with the prime aim of drawing up of a new and well-defined industrialization plan and supervising its execution, it was taken into consideration that it would comprise a technical section for elaborating unified standards and specifications for local raw materials and products.

A further step was taken in 1957 when a law for standardization was issued deciding the establishment of an official competent authority for all matters concerning standardization in the country. Accordingly, the Egyptian Organization for Standardization (EOS) came into being, marking a turning point in the history of industrial development in the UAR.

5. Since 1957, two industrial programmes have already been executed. The total capital that has been actually invested in these programmes amounted to £ E 585 million.

In order to safeguard such huge capital and other capital to be invested in the years to come, (a sum of £ E 128 million will be invested in industry during the second national economic plan - 1965-1972), and to promote mass production methods so essential for interchangeability and economical production, and also to achieve and assure a high quality of products so important for local consumption and for export goods as well, it has been absolutely necessary to co-ordinate the programmes of the Egyptian Organization for Standardization with the over-all economic plans of the country.

II. The Egyptian Organization for Standardization

A. Functions

6. To fulfil the objectives of the introduction of standardization in the UAR, the following functions were assigned to EOS:

(a) Elaborating standard specifications for raw materials and products of all local industries;

(b) Securing reference standards for calibration and verification of measures and measuring instruments;

(c) Ensuring the existence of standard systems for technical classifications, definitions, terminology and symbols;

(d) Providing the necessary measures for quality control of raw materials and products in conformity with the standard specifications, and establishing central and regional laboratories for metrology and quality control;

(e) Co-ordinating the standardization work in the Republic in accordance with other international standardization work.

B. Structure

7. The organizational structure of the EOS consists of the following:

(a) A council, headed by the Under-Secretary of State for Industry, of 15 members representing the different economic, technical, industrial, and other sectors in the country related to standardization.

(b) A permanent committee of 12 members for standard specifications, to deal with all the work related to standard specifications and quality control.

(c) A permanent committee of 12 members for metrology and calibration, to deal with all the work related to metrology, calibration, and verification of measures and measuring instruments.

(d) Specialized standing committees, of 10 expert members each, for the main sectoral standardization and metrology activities, e.g.: mechanical, metallurgical, electrical, chemical, food and agricultural products, textiles, etc.

These permanent and standing committees are authorized to form technical committees for preparing drafts of standard specifications, and methods of testing and calibration in accordance with the programmes adopted by the council in parallel with the national economic plans.

(e) The technical and administrative body consists of the following main departments and sections:

(i) Standard Specifications Department: Metallurgical and Engineering - Electrical - Chemical - Building Materials - Textiles - foods.

(ii) Quality Department: Conformity - Certification and Marking - Quality Research and Evaluation.

(iii) Metrology Department: Measures - Length and Industrial Metrology - Laboratories and District Offices.

(iv) Technical Relations Department: Foreign Relations - Public Relations - Documentation - Designs and Engineering Drawings.

(v) Administration and Finance Department: Personnel - Finance - Purchases and Sales - Legislations.

III. Standardization activities in the UAR

A. Standard specifications

8. The first programme for Standardization which was approved by the EOS council at the beginning of 1958 was based on priorities and covered all industries concerned as the following:

(i) Newly produced articles;

(ii) Export articles amd materials;

(iii) Requirements of governmental concerns and armed forces;

(iv) Consumer goods.

More than 70 technical committees were formed to execute that programme and as a result of their work more than 120 standard specifications were approved before the middle of the year 1960.

9. In July 1960 the EOS started a five-year programme in parallel with the first Five-Year National Economic and Social Plan which was adopted with the ultimate object of doubling the national income in ten years.

Over 400 technical committees were formed for the execution of this programme, and by the end of the fourth year about 600 Egyptian Standard

Specifications were approved by the EOS council, which covered more than 8,000 types and sizes of about 1,500 products together with about 2,000 standard testing and calibration methods.

10. The EOS follows the usual methods in drafting standard specifications. A technical committee is assigned by the concerned standing committee to study and prepare the draft standard, and submits it to the permanent committee which, after approval, has it published as a draft standard specification.

This draft is given wide circulation among interested groups, producers, consumers and others. The comments received as a result of this circulation are then studied by the technical committee, and the draft, as appropriately amended, is submitted by the permanent committee concerned to the council, for approval as an Egyptian Standard Specification.

B. Scientific and Industrial Metrology

11. To serve the practical realization of the aims of the EOS in the fields of metrology, the Organization has laid down in 1960 a three-level scheme whose main function would be to maintain and furnish standards of measurements in the various fields of industrial and scientific activities.

This scheme is based on the establishment of the following laboratories:

(i) The National Physical Laboratory for Metrology (NPLM) - Level A.

(ii) The Central Laboratory for Metrology and Material Testing (C.C.L.) - Level B.

(iii) District Laboratories and Offices - Level C.

The first two of these laboratories are now under execution by the Ministry of Scientific Research with the aid of the United Nations Special Projects Fund for the NPLM, and of the Government of the Federal Republic of Germany for the C.L.

12. The existing old system of calibration and verification is now being reviewed, with the aim of organizing a new elaborate scheme for periodic legal and industrial calibration and verification of the measuring and testing instruments and equipment.

EOS helped much during the transition period of the introduction of the metric system in the country, and is now following-up its application in all sectors of industry and giving technical advice and assistance to overcome any encountered difficulties in this field.

C. Quality Control

13. However, in carrying out its functions and in fulfilling its ultimate goals, the EOS has felt the urgent and pressing need for organizing a sound industrial quality control system in the country. Such a system would supplement the above-mentioned metrology scheme and also the existing testing facilities in various governmental departments and technical and industrial establishments. It would be responsible for the efficient elaboration and application of national standard specifications, and also for the training of specialists and technicians in fields so essential for the successful adoption and implementation of standardization.

Besides -- by compromising level C and part of level B in the above-mentioned scheme - the proposed institution would be responsible for providing the necessary link between industry on the one hand and the NPLM and the metrology C.L. on the other hand.

14. Consequently, the EOS has conducted extensive studies about this point, the results of which have led to the setting up of a new project for the establishment of a quality control institution during the next five years.

The EOS is aiming that through this project it will be possible to attain the following objectives:

(i) The optimal utilization of indigenous raw materials;

(ii) Proper evaluation of national standard specifications;

(iii) Raising the standard of quality of locally produced articles and commodities;

(iv) Lowering manufacturing costs of industrial products;

(v) Raising the quality of export goods with subsequent increase in foreign currency so essential for the economic development of the country;

(vi) Up-grading of technical personnel for the most efficient utilization of standardization and quality control techniques;

(vii) Securing and improving precision in industrial production.

D. Certification and Marking

15. In order to maintain the reputation of locally produced products, the EOS decided to adopt a system for certification, marking and labelling, to indicate those products which are produced in conformity with the national standard specifications.

It was decided to apply this system gradually, and it was first put into operation in connexion with domestic appliances using liquified butane gas, in view of the expansion of their local production, and to ensure their efficient and safe performance.

16. Before a certificate is issued, a prototype of the appliance is tested, and when the testing proves that the prototype conforms to the concerned standard specification, the factory is permitted to go ahead with production according to the approved prototype, and is entitled to place on the appliance the EOS conformity mark, provided the production is subjected to regular technical inspection.

The inspectors of the EOS may also make sudden inspections in order to ensure that the production is in accordance with the standard specification.

Under the above system, the EOS has approved 15,000 appliances in 1959, 40,000 in 1960, 50,000 in 1961, 55,000 in 1962, 76,000 in 1963, and about 80,000 in 1964.

Arrangements are being made to subject kerosene pressure stoves to the same system, which will be gradually applied to other commodities and products.

E. Information and Training

17. It was found necessary for the successful implementation of standardization in the country, to induce and raise the interest of producers and consumers in its procedures and goals. Consequently, the technical relations department publishes a periodical bulletin, as well as informative phamphlets and booklets, which explain the aims and benefits of standardization to all citizens, producers and consumers.

Radio and television braodcasts occasionally help in explaining the role of the EOS in protecting consumers against fraud and dangers, as well as its efforts in reducing production costs, and ensuring high quality and efficient service and performance of products.

The EOS participates also in the local industrial and commercial fairs with informative stands and labels, and a permanent standardization museum is now being organized in the EOS premises for public information.

18. Local conferences and symposia are also organized, in which representatives of industrial, scientific and consumer concerns participate for the benefit of standardization and industry.

A training scheme is being laid down for training and up-grading, technicians, scientists, and engineers in fields so essential for the successful adoption and implementation of standardization.

F. Participation in International and Regional Standardization efforts

19. The UAR has shown a keen interest in participating in international and regional activities, so as to learn from the experience of the more developed countries and, at the same time, to contribute to international co-operation for the progress of industry and technology.

Thus, before the end of 1957, the EOS joined the International Organization for Standardization (ISO) and is now a member of 51 of its Technical Committees. This step was followed in 1961 by joining the International Organization for Legal Metrology, and it is now participating

in the activities of 9 of its Working Groups. Lastly, in May 1962, a Presidential Decree was issued for the adhesion of the UAR to the Meter Convention signed in Paris in 1875.

20. Concerning regional standardization activities, the UAR organized the second session of the Middle East Standardization Conference which was held in Cairo during January 1961, and was also attended by some experts from many developed countries. The deliberations and recommendations raised in this Conference have proved the importance of strengthening regional co-operation in this major field.

21. The UAR, being a member of the Permanent Technical Committee for Standards formed by the Arab League, is actively participating in its activities.

It is hoped that an agreement for the establishment of a Regional Arab Standardization Body will be signed this year to ensure mutual and fruitful technical economic co-operation in this major field between the Arab States.

Preliminary discussions with some responsible African authorities showed similar interest between African States aiming to consolidate their efforts in the application of standardization in industrial development.

Such interest should be encouraged and thoroughly discussed during the Symposium for Industrial Development in Africa under item III of the provisional agenda.

IV. Conclusion

22. Experience gained in the UAR during the past few years has indicated that the adoption of standardization in a developing country is by no means an easy task, as it may have to confront very many obstacles. However, by the adoption of standardization, the developing countries benefit from all the well-known advantages of standardization, such as the complete consideration of local conditions, the efficient utilization of national resources, the foundation of national industry on a sound basis, gaining the confidence of the public in national production,

improving production in quantity, quality and cost, increasing export goods, improving material and moral conditions, as well as increasing national revenue and raising the standard of living.

23. Moreover, it has become a generalized phenomenon that developing countries are now adopting planning as the basis of their economic development. Needless to say that in a planned economy it is an essential element to have national standards. This has been truly verified through the experience gained in our country, and although it is somewhat premature at our present stage of development to give definite statistics as to the effect of standardization on the general economy in the UAR, it can be said, however, that the preliminary results obtained by the adoption of a standardization system have justified all the efforts spent.

24. It is hoped that the Symposium on Industrial Development in Africa would take such results into consideration and study the possibility of co-ordinating African efforts in the field of standardization through creating a "Regional African Organization for Standardization and Metrology" with an ultimate goal of promoting industrial development and quality of production in Africa, besides the co-ordination and unification of standardization systems in member countries in co-operation with other international bodies.

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